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Datasheet for ABIN3096191

## TYW1B Protein (AA 1-668) (Strep Tag)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	TYW1B
Protein Characteristics:	AA 1-668
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This TYW1B protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

#### Product Details

Sequence: MDPSADTWDL SSPLISLWIN RFYIYLGFAV SISLWICVQI VIEMQGFATV LAEAVTSLDL  
PVAIINLKEY DPDDHLIEEV TSKNVCVFLV ATYTDGLPTE SAEWFCKWLE EASIDFRFGK  
TYLKGMRDAV FGLGNSAYAS HFNKVGKNVD KWLWMLGVHR VMSRGECD VVSKKHGSIE  
ANFRAWKTKF ISQLQALQKG ERKKSCGGHC KKGKCESHQH GSEEREESQ EQDELHHRDT  
KEEPPFESSS EEEFGGEDHQ SLNSIVDVED LGKIMDHVKK EKREKEQEE KSGLFRNMGR  
NEDGERRAMI TPALREALTK QVDAPRERSL LQTHILWNES HRCMETTPSL ACANKCVFCW  
WHHNNPVGTE WLWKMDQPEM ILKEAIENHQ NMIKQFKGVP GVKAERFEEG MTVKHCALS  
VGEPIMYPEI NRFLKLLHQC KISSFLVNA QFPAEIRNLE PVTQLYVSVD ASTKDSLKKI  
DRPLFKDFWQ QFLDSLKALA VKQRTVYRL MLVKAWNVD LQAYAQLVSL GNPDFIEVKG  
VTYCRESSAS SLTMAHVPWH EEVQFVREL VDLIPEYEA CEHEHSNCLL IAHRKFKIGG  
EWWTWIDYNR FQELIQEYED SGGSKTFSK DYMARTPHWA LFGANERSFD PKDTRHQRKN  
KSKAISGC

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

### Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

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## Product Details

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1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity: >80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Endotoxin Level: Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

Grade: Crystallography grade

## Target Details

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Target: TYW1B

Alternative Name: TYW1B ([TYW1B Products](#))

Background: S-adenosyl-L-methionine-dependent tRNA 4-demethylwyosine synthase TYW1B (EC 4.1.3.44) (Radical S-adenosyl methionine and flavodoxin domain-containing protein 2) (tRNA wybutosine-synthesizing protein 1 homolog B),FUNCTION: Probable component of the wybutosine biosynthesis pathway. Wybutosine is a hyper modified guanosine with a tricyclic base found at the 3'-position adjacent to the anticodon of eukaryotic phenylalanine tRNA. Catalyzes the condensation of N-methylguanine with 2 carbon atoms from pyruvate to form the tricyclic 4-demethylwyosine, an intermediate in wybutosine biosynthesis (By similarity). {ECO:0000250}.

Molecular Weight: 76.9 kDa

UniProt: [Q6NUM6](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

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## Application Details

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mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

## Handling

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Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)

## Images

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**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process